



DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
FORT NORFOLK, 803 FRONT STREET
NORFOLK, VIRGINIA 23510-1096

REPLY TO
ATTENTION OF:

March 3, 2008

Western Virginia Regulatory Section
05-R022/NAO-2006-05097 (Stumpy Lake/Gum Swamp)

Tri-City Properties, LLC
Attn: Mike Gelardi
3333-24 Virginia Beach Boulevard
Virginia Beach, Virginia 23452

Dear Mr. Gelardi:

This letter is in reference to your permit application to impact 181.3 acres of forested wetlands associated with development of the 428-acre Centerville Property east of Centerville Turnpike and north of Elbow Road in Chesapeake, VA. I have completed my review of your proposal and determined that your project is not in the public interest nor does it comply with the Section 404(b)(1) Guidelines as the least damaging practicable alternative. Therefore, I am denying your application. My authority to take this action is contained in 33 CFR 325.8 (b) and can be found in the Federal Register, dated November 13, 1986. The following provides the basis for my decision.

In letters dated June 7, 2005, March 8, 2007 and again on September 5, 2007 we asked you to provide us with information relating to onsite alternatives that would avoid and minimize impacts to wetlands. This included a request to evaluate an option to avoid all wetlands on site and develop only a 90-acre contiguous upland area. No data were submitted to our office detailing this development option. Information regarding other possible alternatives was also requested, but never adequately addressed. Therefore, you have failed to rebut the regulatory presumption that a less environmentally damaging practicable alternative to the development exists. In addition, the wetlands on site that are proposed to be impacted provide substantial conservation, water quality and habitat functions. These wetlands support and buffer a unique aquatic habitat and include rare plant and animal species that exist in the Gum Swamp/North Landing River system and the Intracoastal Waterway. The benefits to be derived from this project do not outweigh the substantial detrimental impacts and it is contrary to the public interest.

As we have previously communicated, you should consider an alternative that makes maximum use of the 90 acres of uplands north of Elbow Road. We have communicated with the City regarding this and they are aware of our concerns regarding avoiding and minimizing impacts to wetlands on this property such as those associated with the proposed Plantation Woods Parkway. If you choose to approach the City in order to determine the maximum amount and type of development that is feasible in the 90-acre upland area, we recommend a preapplication consultation with our office prior to applying for a permit.

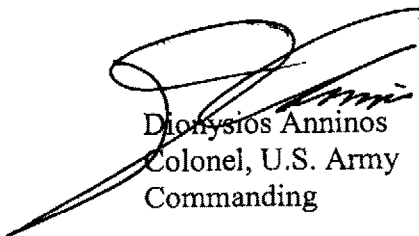
If you object to this permit denial, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this permit denial you must submit a completed RFA form to the North Atlantic Division Office at the following address:

James Haggerty, Regulatory Appeals Review Officer
Phone: (718) 765-7150 Fax (718) 765-7210
United States Army Corps of Engineers, North Atlantic Division
Building 301, General Lee Avenue
Fort Hamilton Military Community
Brooklyn, NY 11252

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete; that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address within 60 days from the date of this letter. It is not necessary to submit an RFA form to the Division office if you do not object to this permit denial.

Copies of this letter are being furnished to Department of Environmental Quality, Virginia Beach; Environmental Protection Agency, Philadelphia; and U.S. Fish and Wildlife Service, Gloucester.

Sincerely,



Dionysios Anninos
Colonel, U.S. Army
Commanding

Enclosure

NOTIFICATION OF ADMINISTRATIVE APPEAL DECISIONS AND PROFFERED PERMIT REQUEST FOR APPEAL

Applicant: Tir-City Properties, LLC	File Number: NAO-2006-5097	Date: 3/3/08
Attached is:		See Section below
<input type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
<input checked="" type="checkbox"/>	PERMIT DENIAL	C
<input type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION

If you have questions regarding this decision and/or the appeal process you may contact:

Robert Berg
Environmental Scientist
(757) 201-7793

If you only have questions regarding the appeal process you may also contact:

United States Army Corps of Engineers
North Atlantic Division
ATTN: James Haggerty, Regulatory Appeals Review Officer
Building 301, General Lee Avenue
Fort Hamilton Military Community
Brooklyn, NY 11252
(718) 765-7150

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

Signature of appellant or agent.

Date:

Telephone number:

Norfolk District Corps of Engineers
Western Virginia Regulatory Section (Stumpy Lake)
05-R0222/NAO-2006-5097

SUBJECT: Statement of Findings and Environmental Assessment of the District Engineer for a permit application submitted by Tri-City Properties, LLC to place fill material in 181.3 acres of forested wetlands for the development of a mixed use master planned community in the Greenbrier area of Chesapeake, Virginia.

a. Name of Applicant:

Tri-City Properties, LLC
ATTN: Mike Gelardi
3333-24 Virginia Beach Boulevard
Virginia Beach, Virginia 23452

b. Location, Description, and Purpose of the Activity:

The project is located on a 428-acre parcel (328 acres of which are proposed for development) consisting of 297.4 acres of forested wetlands and 130 acres of uplands, 90 of which are agricultural fields. The remaining uplands consist of pockets of land interspersed among wetland areas in the northern portion of the property. The property is located east of Centerville Turnpike, north of Elbow road and south/southwest of Stumpy Lake in Chesapeake, VA.

The applicant's stated project purpose is the development of a master planned mixed use community to support the rapidly expanding commerce and employment center around the I-64 interchange at Greenbrier. The overall project purpose is to provide residential housing and commercial development within the Greenbrier area of Chesapeake. This application is being considered pursuant to Section 404 of the Clean Water Act. We have determined that this project is not water dependent.

c. Chronology of Events and Remarks:

Companies owned by principals of the applicant (E.S.G. Enterprises, Inc., Aqua Sports, Inc., and TransAmerica Services, Inc.) began purchasing parcels comprising the 428-acre Centerville Property in the mid 1980's. E.S.G. Enterprises, Inc. purchased 272.277 acres of property from Peter G. Decker & Bess P. Decker, Rudolph F. Schuster, I.S. Schuster & Irene G. Schwartz, Equity Mortgage Corp. on 6/11/86 for \$1,500,000.00. On 12/17/86, E.S.G. Enterprises purchased 21.736 acres of property from Norris E. Halpern for \$434,800.00. On 12/17/86 E.S.G. Enterprises also purchased 11.185 acres of property from Halpern Development, Corp. for \$223,700.00. On 11/13/87 Aqua Sports, Inc. purchased 98.143 acres of property from F, M&S Associates of Elbow Road for \$951,150.00. On 10/5/88 Aqua Sports, Inc. purchased 24.255 acres of property from James M. Minter & Irene H. Minter for \$193,800.00. On 3/9/92 Aqua Sports, Inc. transferred property to E.S.G. Enterprises, Inc. On 12/29/93 E.S.G. Enterprises, Inc. conveyed all properties east and west of Centerville Turnpike in Chesapeake, VA to

TransAmerica Services, Inc. for \$2,100,000.00. On 11/30/98 TransAmerica Services, Inc. conveyed these same properties to Tri-City Properties, LLC (the applicant) for \$250,000.00.

In 1989 the City Council for the City of Chesapeake approved rezoning on 922 acres of property east and west of Centerville Turnpike including this parcel owned by TransAmerica Services. The property was rezoned for commercial and residential development. The property was rezoned again in 1995 resulting in a number of proffers, including road improvements, dedication of a school site, a park site and a fire station site.

A wetland delineation completed by Law Environmental and Engineering Services dated 10/11/94 determined much of the property east of Centerville Turnpike, the property proposed to be developed via this permit application, to be wetlands. On 12/23/98 Environmental Specialties Group, Inc. (wetland consultant for the applicant) requested a preapplication site meeting (see preapplication 98-R5751) to review a wetland delineation they completed on a school site located west of Centerville Turnpike and 40 acres of forested area located east of Centerville Turnpike (which is a portion of the property that is the subject of this permit application). The consultant determined small portions of the properties were wetlands. Due to previous Corps work in the area as well as the site conditions present at the time, the Corps disagreed with the consultant's wetland delineation. Therefore, Environmental Specialties Group, Inc. conducted a well monitoring study for the owner on the properties subject to the preapplication in the spring of 1999 (the wells were checked by our office also). A letter was sent to TransAmerica Services, Inc. on 10/5/99 indicating most of the areas examined (including the 40 acres that are part of this permit review) were wetlands based on the confirmation of wetland hydrology in the areas of contention and field indicators present on the site.

In the summer of 1999, Tri-City Properties began ditching wetland areas east and west of Centerville Turnpike, including the property subject of this permit application. The ditch excavation matter was referred to the Environmental Protection Agency (EPA) for an enforcement investigation. The ditch excavation ceased when the Virginia Department of Environmental Quality (DEQ) began regulating excavation work in wetlands in July 2000. DEQ confirmed a wetland delineation on the Centerville Property (areas east of Centerville Turnpike and the areas proposed for development in this permit application) in the summer of 2001 for the applicant's permit application which was submitted to DEQ only.

On November 21, 2003 the Virginia Department of Environmental Quality issued a permit to Edward S. Garcia, Sr. (applicant) to impact 144.6 acres of forested wetlands by filling or excavating ditches for conversion of forested wetlands to uplands to facilitate the development of a master planned mixed use community (permit application number 00-1688).

On 1/21/05 this permit application (05-R0222/NAO-2006-5097) to impact 144.6 acres of forested wetland was received by the Corps. The applicant submitted the same development proposal that DEQ had previously permitted. This proposal consists of commercial development adjacent to Centerville Turnpike, multifamily housing (condominiums and townhomes) east of the commercial development and into the north central portion of the site and single family lots in the southern portion of the site (north of Elbow Road and north/northwest into the central

portion of the 428 acre site). The Southeastern Expressway is shown running parallel to Elbow Road on the southern portion of the property on this site plan. As shown on the plan, the applicant has transferred 20 acres of a 90-acre contiguous upland area to the City of Chesapeake as required by proffers. The applicant will require rezoning for the proposed development. The City has expressed flexibility in working with the applicant on zoning/proffer issues on this property.

A Public Notice was issued on 2/1/05. During a site visit with EPA on March 14, 2005 it was noted that the DEQ approved wetland delineation was not accurate (ponding water and blackened leaves in designated upland areas). Therefore, the delineation was reexamined (see preapplication 05-R1451/NAO-2006-5105) and a Corps approved wetland delineation was verified on 1/17/07 that added an additional 36.7 acres of wetlands to the DEQ approved wetland delineation. Another Public Notice was issued on 1/20/07 due to the large increase in wetland impacts (up to 181.3 acres from 144.6 acres) from this proposal resulting from the modification of the DEQ wetland delineation. A revised site plan showing the new limits of wetlands was submitted, the Southeastern Expressway was removed from this site plan and additional single family lots were put in its place. Proposed mitigation for these proposed impacts would consist of restoration of agricultural fields to forested wetlands (2:1, impact amount:restoration amount) in western Chesapeake adjacent to the Dismal Swamp (Route 17 and Ballack Road) along with preservation of 145 acres immediately adjacent and to the east of the proposed development site and a conservation easement on 121.3 acres of forested area on site (northeast portion of the site).

d. Probable Effects of the Proposed Work On:

1. Conservation: Avoiding the proposed impacts would conserve 181.3 acres of forested wetlands and their functions. The DCR submitted comments to our public notice dated 2/13/07 indicating the property is within the North Landing River-Gum Swamp Conservation Site. The Corps agrees. This site, and all surrounding undeveloped areas in the vicinity of this property to the west of Stumpy Lake, are listed as the highest priority for protection, along with Gum Swamp, in a report entitled "Conservation Plan for the Southern Watershed Area" by the Virginia Dept. of Conservation and Recreation (DCR), Division of Natural Heritage, Natural Heritage Technical Report 00-12 and dated February 2001. The DCR study was undertaken to show areas that should be preserved due to their unique ecological resources, rare or threatened plants/animals and to show ways in which corridors connecting various natural areas could be preserved. Conservation Sites are tools that represent key areas of the landscape that warrant review for possible conservation action due to natural heritage resources and the habitat they support. The "Southern Watershed Area Multiple Benefits Conservation Plan, Chesapeake and Virginia Beach, VA", dated July 2001, indicates, "Existing forested wetlands around Stumpy Lake should be preserved and opportunities for improved buffers between residential run-off and the lake should be explored". This plan shows this site and much of the nearby areas as part of proposed conservation corridors. In addition, The Nature Conservancy and DCR have purchased numerous parcels in the North Landing River watershed for the above stated reasons. This site is currently part of a mostly forested corridor, much of it wetlands, linking the Dismal Swamp to the west and Back Bay to the east and is important

for the movement of wildlife. Numerous rare or protected plants and animals are known to be present in this corridor area, such as bald eagles, Virginia least trillium, the canebrake rattlesnake, the Dismal Swamp Southeastern shrew and the Eastern big-eared bat.

Numerous citizens responded to our Public Notices indicating the proposed development site was within a proposed conservation area and indicating that they support its preservation. The City of Chesapeake commented on the proposal and indicated that the property is within a conservation corridor on the City's Southern Watershed Conservation Plan. The City of Virginia Beach commented on the proposal and indicated that per the Department of Conservation and Recreation, the Gum Swamp/North Landing River watershed has been documented as containing more ecological diversity than any areas east of the Blue Ridge Mountains. The City of Virginia Beach purchased a large parcel from the City of Norfolk (most of the property consists of forested wetlands, but also includes a golf course and Stumpy Lake) on June 14, 2001 for protection as a natural area. The City of Virginia Beach property is adjacent to the proposed impact site and both serve as a portion of the headwaters to the Gum Swamp/North Landing River watershed. For these reasons, the public interest in preserving or conserving this site is substantial.

2. Economics: No adverse impacts are anticipated; denial of this permit would only have a minor effect on the local economy. The proposed development would add jobs and revenues to the City of Chesapeake from the commercial/retail portion of the proposed development and temporarily add jobs for construction activities associated with the development. Further information regarding economics can be found in the alternatives section later in this document.

3. Aesthetics: No adverse effects are anticipated. While aesthetic impacts vary with individual tastes, the impacts of the project are minimal from a national perspective. Denial of this permit ensures the aesthetic nature of this site remains unchanged, which is important for the natural heritage of this area as detailed in the conservation section above.

4. General Environmental Concerns: The proposed impacts to 181.3 acres of forested wetlands would have an adverse effect on forested wetlands and fish and wildlife habitat they provide. These concerns are addressed more fully in parts five and seven, below.

5. Wetlands: The project as proposed would adversely affect 181.3 acres of forested wetlands. These wetlands perform many functions pertaining to water quality such as retaining flood water, filtering runoff, retaining nutrients and providing habitat for a variety of wildlife. These wetlands are part of the headwaters of Stumpy Lake/Gum Swamp and the Intracoastal Waterway which both drain to the North Landing River. The Gum Swamp/North Landing River watershed consists of ecologically unique wetland types and contains unique plant and animal species. Both TNC and DCR have purchased numerous parcels in this

watershed for preservation and the wetland functions of the proposed impact site help to buffer these ecologically important areas. In addition, these wetlands are part of a corridor of undeveloped land stretching from the Dismal Swamp to the North Landing River. Corridors such as this are important for movement of wildlife. This was detailed in the Conservation section in paragraph one, above.

The forested wetlands on this property consist of a mineral flat wetland system. The northern portions of the site drain to Stumpy Lake (Gum Swamp/North Landing River) and the southern portion of the property drains under Elbow Road to the Intracoastal Waterway (per a drainage study for the Centerville Properties, Chesapeake, VA by Gasper Aluzzo and dated 12/10/02). Stumpy Lake is located to the east of this site and was created by damming Gum Swamp. To the north of the site is residential development, to the west is Centerville Turnpike (just west of Centerville Turnpike is a large area of wetlands) and to the south is forested and agricultural land with residential development along Elbow Road. This site was historically part of a much larger wetland complex that drained via natural topographically defined drainage systems (most of which have been subsequently ditched or channelized) to Stumpy Lake or to the Intracoastal Waterway. Man-made activities consisting of road construction, ditching, conversion of forested areas to agricultural fields and residential development have destroyed wetlands and altered the natural flow of this system. The wetlands remaining on this site are providing several important functions that benefit Stumpy Lake (and the downstream waters of Gum Swamp/North Landing River) and the Intracoastal Waterway: carbon sequestration, denitrification, and temporary storage of precipitation (flood flow desynchronization).

The wetlands on this site consist of an older growth forested community with sapling/shrub and herbaceous vegetation components. The vegetation on this site takes in CO₂ (a greenhouse gas) from the atmosphere as part of the photosynthesis process and the carbon becomes incorporated in the vegetation biomass (tree tissues/structure) and oxygen and water vapor is released into the atmosphere. The surface contains leaf litter, numerous downed/rotting trees, stumps and rootwads. Decomposition of organic matter under anaerobic conditions present in saturated soils proceeds much more slowly than under aerobic conditions (Mitsch & Gosselink 1993). Thus, anaerobic soil conditions can cause wetlands to act as carbon sinks (Morris 1991) as they retain more carbon than they release (which if released could become CO₂, a greenhouse gas). Evidence of carbon sequestration on site includes continued growth and development of the mature mixed-pine hardwood communities (incorporation of carbon into the vegetation biomass) comprising the forested wetlands on the subject property, the accumulation of woody debris and leaf litter (blackened leaves are evident in lower elevation areas within the wetlands on this property) on the ground and the presence of an "O" horizon, the organic layer of soil, made up mostly of leaf litter and humus (decomposed organic matter); atop the hydric soil surface on the site. The decomposed woody debris and leaf matter is broken down and slowly released to downstream waters to provide food for microorganisms which serve as the base for the food chain.

Anaerobic soil conditions, which are present in wetlands whose soils are saturated, favor the rapid conversion of nitrates (a pollutant) to nitrous oxide (N₂O) and gaseous nitrogen (N₂) by bacteria, a reduction process known as denitrification (Mitsch and Gosselink 1993). In addition, nitrogen can be removed through plant assimilation and mineralization. Anaerobic conditions are known to exist in the wetlands on this site, as evidenced by the presence of ponding of water on the soil surface creating blackened leaves, saturation of the soil near the soil surface, low chroma (hydric) soils and redoxymorphic features (mottles) within the soil profile. Because of this, we conclude that reduction of nitrates takes place in the wetlands on this site.

Although the project site receives some stormwater runoff from agricultural or urban lands, it also receives atmospheric deposition of nitrates as do all lands (whether upland or wetland) in the eastern U.S. (Puckett 1994). Nitrate (NO₃) is a federally-listed drinking water pollutant that contributes to eutrophication of waters (Groffman & Hanson 1991, Hanson et al. 1994). EPA indicated that eutrophication problems currently occur in Stumpy Lake. Atmospheric deposition (wet and dry deposition) is a major source of nitrate deposition in eastern North America, and is a product of combustion, particularly combustion of fossil fuels (Puckett 1994). Approximately 1/3 of the nitrogen loading in waters in the Chesapeake Bay region is due to atmospheric deposition (Puckett 1994). Estimates of annual atmospheric deposition of nitrogen in eastern Virginia and the Chesapeake Bay region range from 4.6 to 9 pounds/acre/year (Morris 1991, Puckett 1994, Baumgardner et al 2002). Measured rates of denitrification in North American wetlands depend in part on loading and range from 1 to 21 pounds of nitrogen per acre (Groffman and Hanson 1997, Hanson et al 1994, and Morris 1991). Based on this information, we conclude that these wetlands are removing between 181 to 3,801 pounds of nitrogen per acre per year.

The wetlands on this property store the precipitation that falls on the site (approximately 40 inches in an average year) and any runoff from adjoining areas, releasing it gradually into Stumpy Lake and the Intracoastal Waterway. Large expanses of blackened leaves are present in the wetland areas on this site, an indication of water storage over large areas. These forested wetlands slow the discharge of flows into downstream waters due to the presence of microtopography (hummocky terrain), downed trees/logs and vegetation (tree, sapling and herbaceous layer vegetation) that help to reduce peak flows (desynchronizing flows) which helps to reduce downstream flooding as well as reduce excessive erosion and transport of nutrients (pollutants) to Stumpy Lake (and the downstream waters of Gum Swamp/North Landing River) and the Intracoastal Waterway. Elimination of these wetlands would allow additional nitrates to flow downstream adding to eutrophication issues which exist in downstream waters such as in Stumpy Lake.

The Intracoastal Waterway, which ultimately flows into the North Landing River, receives runoff from the southern portion of this site. Water draining from the

entire site ultimately ends up in the North Landing River. The U.S. Army Corps of Engineers Norfolk District Operations Support Section is responsible for dredging the Intracoastal Waterway for navigation purposes. These waterways are used by both commercial and recreational boaters and as such are important for commerce. From 1947 until 1995 the requirement for dredging has increased in frequency with time (last interval was 4 years), as a result Federal resources have to be expended at a more frequent interval to remove accumulated sediments from these waterways to remove impairments to navigation (see Declaration of Joel F. Scussel dated 9/17/01 for additional information). Therefore, elimination of these wetlands will result in less synchronized flood flows and increased sedimentation downstream.

EPA indicated that the wetlands on this site are part of one of the largest and most significant wetland tracts remaining in the densely populated coastal plain of the mid-Atlantic region. EPA also noted that the 4,150 acre Gum Swamp Natural Area (this site serves as headwaters to this area) is located south of Stumpy Lake and contains a stand of old growth cypress and tupelo and a bottomland hardwood swamp that have been recognized as significant natural areas by the Virginia Department of Conservation and Recreation (DCR). EPA also points out that the site is the headwaters of the North Landing River Wetland Ecosystem, located approximately one mile south of the site. EPA stated the North Landing River Wetland Ecosystem is Virginia's largest natural area preserve and one of the largest expanses of undisturbed freshwater marsh along the entire eastern seaboard (The Nature Conservancy, 2005). EPA stated that intensive development has occurred north and west of the property. As a consequence of this development, regional storm water management issues and degradation of surface water quality are impacting Stumpy Lake, Gum Swamp and other natural resources south and east of the site. The wetlands surrounding Stumpy Lake protect Gum Swamp and the North Landing River ecosystem by providing vital natural filtration and reduce sediment loading of runoff from neighboring urbanized areas. Stumpy Lake, due to its shallow water depths and high levels of nutrients and turbidity, currently has poor water quality. Removal of wetland functions provided by the wetlands on this site in the headwaters of Stumpy Lake could further impair the water quality of Stumpy Lake as wetlands filter nutrients and pollutants prior to them entering receiving waters. Downstream areas associated with the North Landing River are ecologically unique and the wetlands on this site filter water prior to it flowing to these sensitive areas. EPA is concerned the proposed wetland mitigation will not adequately mitigate impacts to old growth forested wetlands on site (applicant stated the site contains a 50 to 60 year old mixed deciduous late successional forest) in a unique and ecologically valuable wetland system.

The FWS indicated that the applicant's proposed impacts would exceed the acreage of impacts permitted by the Corps in the City of Chesapeake from 1998-2002. Between 1997 and 2001 the Corps permitted impacts to approximately 135 acres of wetlands in the City of Chesapeake. FWS pointed out that DCR has identified the eastern portion of this site within the North Landing River Macrosite

and while the forested community on this site is not rare, it buffers the unique wetland resources downstream therefore requiring more scrutiny in the permit review process. The FWS asserted that the proposed impacts are significant due to the size of the proposed impact and the loss of these wetlands in perpetuity and they reiterated that the Norfolk District has never issued a permit for this amount of impact for a commercial/residential proposal before.

The National Marine Fisheries Service commented on the public notice for this proposal and stated that while the resource proposed to be impacted is not in their jurisdiction, they point out that wetlands perform many valuable functions that protect downstream water quality and provide habitat for wildlife.

The wetlands on this site and proposed to be impacted remove nutrients, store floodwaters and slow their flows which reduces downstream erosion and sedimentation. The wetlands buffer downstream wetlands that are ecologically unique and have been preserved and also provide habitat for wildlife including State endangered species.

6. Historic Properties: The VDHR Data Sharing System (DSS) showed a number of archaeological resources (44CS0270 and 44CS0274) on and adjacent to agricultural fields on the property just north of Elbow Road. An old farm house was previously present on the property but was demolished in approximately 1999. The proposed mitigation site is located west of Route 17 and east of Lake Drummond in Chesapeake, VA. An archaeological site (44CS0926) is located on or near the mitigation site and architectural resources (Dismal Swamp Canal and a feeder ditch) are located adjacent to the proposed mitigation site. The 106 review process has not been completed due to a lack of information requested from the applicant.

7. Fish and Wildlife Values: The proposed impact site contains habitat for birds, mammals (deer, squirrels, rabbits, etc.), reptiles and amphibians. The site may provide habitat for a number of rare animals (as detailed in conservation above). In addition, the proposed development would further segment large expanses of forested areas that are important for wildlife usage (corridors). This site, and all surrounding undeveloped areas in the vicinity of this property to the west of Stumpy Lake, are listed as the highest priority for protection, along with Gum Swamp, in a report entitled "Conservation Plan for the Southern Watershed Area" by the Virginia Dept. of Conservation and Recreation (DCR), Division of Natural Heritage, Natural Heritage Technical Report 00-12 and dated February 2001. The DCR study was undertaken to show areas that should be preserved due to their unique ecological resources, rare or threatened plants/animals and to show ways in which corridors connecting various natural areas could be preserved. The DCR submitted comments to our public notice dated 2/13/07 indicating the property is within the North Landing River-Gum Swamp Conservation Site. Conservation Sites are tools that represent key areas of the landscape that warrant review for possible conservation action due to natural heritage resources and the habitat they support. The "Southern Watershed Area

Multiple Benefits Conservation Plan, Chesapeake and Virginia Beach, VA", dated July 2001 shows this site and much of the nearby areas as part of proposed conservation corridors. In addition, The Nature Conservancy and DCR have purchased numerous parcels in the North Landing River watershed for the above stated reasons. This site is currently part of a mostly forested corridor, much of it wetlands, linking the Dismal Swamp to the west and Back Bay to the east and is important for the movement of wildlife. Numerous State rare or protected plants and animals are known to be present in this corridor area, such as bald eagles, the Virginia least trillium (rare with no legal status), the canebrake rattlesnake, the Dismal Swamp Southeastern shrew and the Eastern big-eared bat all of which are State endangered species. The Virginia Department of Game and Inland Fisheries also documented the nearby presence of bald eagles, canebrake rattlesnakes and the Dismal Swamp southeastern shrew.

The proposed impacts to wetlands for this development would affect downstream water quality by increasing sedimentation/pollution. This would adversely affect fish and wildlife because it would lead to clouding of the water due to sediment and algae from excess nutrients and would also result in the loss of decomposed organic material that these wetlands provide to the aquatic food chain.

The project manager performed an endangered species database search. No federally listed threatened/endangered species were documented on the proposed development site or on the proposed mitigation site in the flora & fauna layer in GIS. Two bald eagles nests are shown approximately 1 mile from the site. In addition, the FWS provided comments on this proposal on 3/3/05, 3/18/05 and 2/12/07 and did not raise concerns relating to any federally listed species. The DCR submitted comments on this proposal and indicated that the Virginia least trillium, the canebrake rattlesnake, the Dismal Swamp southeastern shrew have been documented in the vicinity of the proposed impact site and indicate that the site may support habitat for the Eastern big-eared bat (all state listed species).

FWS is concerned about the effects of this project on migratory birds and supports avoiding and minimizing impacts on migratory bird resources and restoration and enhancement of migratory bird habitat as practicable.

Therefore, authorizing the permit would have a substantial adverse effect on fish and wildlife values.

8. Flood Hazards: The project site is located in wetlands and the proposed work would constitute a flood hazard. The loss of these wetland areas will reduce the flood storage capacity functions that wetlands perform. The City of Chesapeake has received a permit to perform ditch work along Elbow Road due to current flooding/drainage issues in this area and elimination of additional flood storage capacity will add to the problem.

Mr. Gene Waters and Mr. James Scott both commented on the Public Notice and indicated that a number of nearby residential areas (Plantation Lakes and Mill Pond Forest) to the

north and west of the proposed development site had experienced flooding during heavy rainfall events in 1999 and expressed concern that this proposed development would add to the flooding problems in the area.

Additional information on flood storage/desynchronization functions of the wetlands on the site can be found in the wetland section above.

9. Floodplain Values: No adverse effects are anticipated. If authorized, the work would have to comply with local floodplain ordinances.

10. Land Use: The existing zoning is for mixed uses (residential and commercial development) and this type of zoning will not likely change. No adverse effects are anticipated. According to 33 CFR 320.4(j)(2), the primary responsibility for determining zoning and land use matters rests with state and local governments. The Corps will normally accept decisions by such governments on those matters unless there are significant issues of overriding national importance such as national security, navigation, national economic development, water quality, preservation of special aquatic sites, including wetlands, with significant interstate importance, and national energy needs.

The City of Chesapeake, Department of Planning, provided comments to the 1/20/07 public notice. The City indicated that the plan associated with the public notice does not fully comply with the 1995 rezoning for the property. Specifically, the area north of Elbow Road that is shown as single family residential development is zoned B1 (Neighborhood Business District) and single family development is shown in a 20 acre park site that is owned by the City. In addition, some single family development south of the proposed Plantation Woods Parkway on the site plan is also located in an area zoned conservation.

Discussions on this matter and a review of some of the development plans submitted by the applicant with the City of Chesapeake have revealed that in addition to the applicant's proposal not complying with current zoning, all alternatives that the applicant has submitted for our review would require rezoning and would reopen consideration of proffers associated with development of this site. The City has indicated that some degree of development would likely be allowed in a 90 acre contiguous upland area, which consists mainly of agricultural fields. The applicant has given the City 20 acres of this upland area for a park as required by proffers, however this park site is shown in different locations on the various alternative site plans. The applicant also has shown a proffered school site in this upland area on some plans.

11. Navigation: Issuance of a permit for impacts to wetlands on this site would result in increased sedimentation in downstream navigable waters (Intracoastal Waterway and North Landing River).

12. Shore Erosion and Accretion: No adverse effects are anticipated.

13. Recreation: Minimal impacts are anticipated. The property has been leased to a hunt club in the past and development of this site would impact that potential usage. The applicant proffered a 20 acre park site to the City of Chesapeake as part of the rezoning of this property in 1995. This park site is located in the 90 acre upland area north of Elbow Road and the land has already been conveyed to the City (per both the applicant and the City of Chesapeake). The applicant would be required to construct tennis courts, softball fields, etc. as part of the proffers for this proposed development. Therefore, recreational opportunities in the area would be increased.

14. Water Supply and Conservation: Stumpy Lake is a back up public water supply reservoir (for citizens of Norfolk and Virginia Beach) for drought conditions and to supplement water from Lake Gaston. Stumpy Lake, due to its shallow water depths and high levels of nutrients and turbidity, currently has poor water quality. Removal of wetland functions provided by portions of the wetlands on this site in the headwaters of Stumpy Lake would further impair the water quality of Stumpy Lake as wetlands filter nutrients and pollutants prior to them entering receiving waters. It should be noted that not all of the wetlands proposed to be impacted drain to Stumpy Lake, but all stormwater leaving the site ultimately flows to the North Landing River either via Stumpy Lake/Gum Swamp or the Intracoastal Waterway that flows into the North Landing River. EPA indicated that impacts to the wetlands on the proposed development site could exacerbate eutrophication problems currently occurring in Stumpy Lake.

The City of Virginia Beach submitted comments to the public notices. They commented on the fact that the purchase agreement for the Stumpy Lake property requires them to maintain Stumpy Lake as a backup water supply for 20 years from the date of purchase. The City is concerned, despite the onsite provisions for water quality proposed by the applicant, that the proposed development could adversely affect the water quality of Stumpy Lake. Such impacts could adversely impair the water supply and increase costs associated with treating the water.

15. Water Quality: The proposed impacts would eliminate 181.3 acres of forested wetlands and their ability to filter and remove pollutants and protect downstream waters from flooding. The anaerobic soil conditions also favor the rapid conversion of nitrates (a pollutant) to nitrous oxide (N₂O) and gaseous nitrogen (N₂) by bacteria, a reduction process known as denitrification (Mitsch and Gosselink 1993). These wetlands also slow flood flows helping protect from downstream erosion and sedimentation that results from erosion.

The increase in unfiltered sediments and pollutants would adversely affect water quality in Stumpy Lake and Gum Swamp/North Landing River and the Intracoastal Waterway. A 401 certification was issued for this proposal on November 21, 2003 with mitigation proposed adjacent to the Dismal Swamp (not within the watershed where the impacts are proposed but within the same HUC). Additional

information on water quality functions provided by the wetlands on site can be found in the wetland section above.

16. Energy Needs: No adverse effects are anticipated.

17. Safety: Minimal adverse effects are anticipated. Proposed development of the southern portion of the property, including the 90 acres of upland, will likely require improvements via proffers to Elbow Road to address current safety concerns. The City of Chesapeake has indicated that the amount of work required to improve Elbow Road will be dependent on the density of development proposed by the applicant in this area of the property. The City has indicated that road widening and installation of a shoulder in the existing right of way or the construction of additional traffic lanes may be required for traffic safety reasons, depending on how much additional traffic would be placed on Elbow Road by the proposed development. City proffers through the zoning process will address this developments impact on traffic safety.

18. Food and Fiber Production: Minimal adverse effects are anticipated. A portion of the property north of Elbow Road has been used as agricultural land historically and up until at least 2005. Development of this land would eliminate further potential for agricultural use.

19. Mineral Needs: No adverse effects are anticipated.

20. Consideration of Property Ownership: No adverse effects are anticipated.

21. Needs and Welfare of the People: No adverse effects are anticipated.

22. Environmental Justice: The project has been reviewed for consistency with Executive Order 12898 (Environmental Justice). The activities associated with this permit application generally do not, by their nature, cause the kinds of adverse impacts addressed by the Executive Order.

23. Clean Air Act Requirements: This project has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. As the proposed permit is being denied, a conformity analysis is not required.

24. The relative extent of the public and private need for the proposed structure or work: The proposed work would provide a variety of residential housing (multifamily, townhouses and single family homes) as well as commercial development consisting of retail and office space. The Greenbrier area of Chesapeake is heavily developed with residential and commercial/retail development. Many apartments, condominiums and single family residences serve the need for housing, numerous retail shopping opportunities and office space exists in this area (Greenbrier Mall for example). The applicant has approximately

90 acres of contiguous uplands off Elbow Road on which they could construct some amount of residential, retail and/or office development (as the market dictates and in compliance with Chesapeake zoning and land use plans) without the need for a permit to serve the public need for such development.

25. The extent and permanence of the benefits and/or detrimental effects which the proposed structure or work is likely to have on the public and private uses to which the area is suited: The proposal would impact 181.3 acres of forested wetlands. This site, and all surrounding undeveloped areas in the vicinity of this property to the west of Stumpy Lake, are listed as the highest priority for protection, along with Gum Swamp, in a report entitled "Conservation Plan for the Southern Watershed Area" by the Virginia Dept. of Conservation and Recreation (DCR), Division of Natural Heritage, Natural Heritage Technical Report 00-12 and dated February 2001. The DCR study was undertaken to show areas that should be preserved due to their unique ecological resources, rare or threatened plants/animals and to show ways in which corridors connecting various natural areas could be preserved. The DCR submitted comments to our public notice dated 2/13/07 indicating the property is within the North Landing River-Gum Swamp Conservation Site. Conservation Sites are tools that represent key areas of the landscape that warrant review for possible conservation action due to natural heritage resources and the habitat they support. The "Southern Watershed Area Multiple Benefits Conservation Plan, Chesapeake and Virginia Beach, VA", dated July 2001, indicates, "Existing forested wetlands around Stumpy Lake should be preserved and opportunities for improved buffers between residential run-off and the lake should be explored". This plan showed this site and much of the nearby areas as part of proposed conservation corridors. In addition, The Nature Conservancy (TNC) and DCR have purchased numerous parcels in the North Landing River watershed for the above stated reasons. This site is currently part of a mostly forested corridor, much of it wetlands, linking the Dismal Swamp to the west and Back Bay to the east and is important for the movement of wildlife. Numerous citizens responded to our Public Notices and indicated the proposed development site was within a proposed conservation area and indicated that they support its preservation.

The City of Virginia Beach commented on the proposal and indicated that per the Department of Conservation and Recreation, this Gum Swamp/North Landing River watershed has been documented as containing more ecological diversity than any areas east of the Blue Ridge Mountains. The City of Virginia Beach purchased a large parcel from the City of Norfolk (most of the property consists of forested wetlands, but also includes a golf course and Stumpy Lake) on June 14, 2001 for protection as a natural area. The City of Virginia Beach property is adjacent to the proposed impact site and both serve as a portion of the headwaters to the Gum Swamp/North Landing River watershed.

EPA stated that intensive development has occurred north and west of the property. As a consequence of this development, regional storm water management issues and degradation of surface water quality are impacting Stumpy Lake, Gum Swamp and other natural resources south and east of the site. The wetlands surrounding Stumpy Lake protect Gum Swamp and the North Landing River ecosystem by providing vital natural filtration and reduce sediment loading of runoff from neighboring urbanized areas. Stumpy Lake, due to its shallow water depths and high levels of nutrients and turbidity, currently has poor water quality. Removal of wetland functions provided by the wetlands on this site in the headwaters of Stumpy Lake could further impair the water quality of Stumpy Lake as wetlands filter nutrients and pollutants prior to them entering receiving waters. Downstream areas associated with the North Landing River are ecologically unique and the wetlands on this site filter water prior to it flowing to these sensitive areas.

For these reasons, the public interest in preserving or conserving this site is substantial. This represents a permanent loss that has been deemed unnecessary as the applicant has approximately 90 acres of contiguous upland areas (total of 130.8 acres of upland on the 428 acre parcel) that could be developed without a permit.

26. The extent of individual and cumulative impacts resulting from the proposed work or structure: The proposal would result in permanent impacts to 181.3 acres of forested wetlands. If the work were to be permitted, the impacts would constitute both an individual and cumulative loss to the aquatic ecosystem. This property was once part of a much larger wetland system that stretched farther to the north and west. Areas to the north (Kempsville area of Virginia Beach) and west (Greenbrier area of Chesapeake) have been heavily developed with residential and commercial/retail development. This development has resulted in a large amount of wetland losses. The applicant owns numerous parcels, consisting mostly of wetlands, west of Centerville Turnpike, east of the proposed development site and a large parcel south of Elbow Road (Lakewood parcel). The applicant proposed development on these additional parcels (mixture of residential and commercial) in the past, but thus far no rezoning has been granted by the City of Chesapeake for these proposals. The applicant has stated they have no current plans for developing these parcels. In addition, the Southeast Expressway, a road proposed to run from Virginia Beach to Chesapeake that would potentially impact approximately 200 acres of wetlands is proposed to run along Elbow Road, if constructed. This would result in additional wetland impacts in this watershed. EPA raised concerns about additional development on other nearby parcels owned by the applicant and about impacts associated with the Southeastern Expressway. The Chesapeake Bay Foundation commented on this project and raised concerns about cumulative impacts from this proposal and the applicant's other parcels also. The wetlands on the site buffer downstream waters that are ecologically unique and contain many rare plants and animals, prompting TNC and DCR to purchase many parcels for preservation in this area. Also, the impacts from this proposal are almost as much as is typically permitted in the entire State in a year.

Finally, approval of a permit to fill 181 acres of forested wetlands for private residential/commercial construction would set a precedent that would likely lead to cumulative adverse impacts. The wetland impacts from this project would be an order of magnitude greater than any similar project approved in Norfolk District since passage of the Clean Water Act. If impacts of this magnitude could be rationalized as being the least environmentally damaging practicable alternative for a residential/commercial development project in Southeastern Virginia, we could expect to see additional applications in the future for 75- 100- or 150-acre impacts that would otherwise be equally unprecedented, but smaller and less damaging when compared to this one. Now, the diminishing number of very large upland undeveloped sites in Hampton Roads is focusing development attention in most of the local cities on in-filling with smaller undeveloped tracts and on redevelopment. There are still plenty of opportunities for such development and redevelopment, and there is relatively little direct pressure from development on the large wetland areas that remain in southern Virginia Beach and Chesapeake, for instance. Issuance of this permit would signal that a door has opened, and that development of large (cheap) wetland tracts will be permitted by regulatory agencies even when many smaller (and relatively more expensive) upland alternatives still exist.

27. Coordination: A Public Notice was issued on 2/1/05 for a development proposal impacting 144.6 acres of forested wetlands (wetland impact acreage based on a DEQ approved wetland delineation that was not verified by the Corps). After the Corps modified the initial wetland delineation, the same proposed development was found to impact an additional 36.7 acres of wetlands on the site. Therefore, another Public Notice was issued on 1/20/07 with a site plan eliminating the Southeastern Parkway with additional single family housing in its place that would impact 181.3 acres of wetlands.

The Environmental Protection Agency (EPA) responded to the first public notice in a letter dated 4/4/05. They recommended denial of the proposal citing the size of the proposed wetland impact, the potential impacts to Stumpy Lake, Gum Swamp and the North Landing River Natural Preserve and the watershed in general. They further stated that the proposal is not water dependent and that the documentation submitted by the applicant is insufficient to justify the need to impact a large acreage of wetlands. Finally, EPA stated they believe the project may result in substantial and unacceptable impacts to aquatic resources of national importance. EPA included a supplement to their letter with technical comments on the proposal. EPA discussed the value of the wetlands on the site as habitat for various species, and indicated that the wetlands on this site are part of one of the largest remaining forested wetland systems in the heavily developed coastal plain in the mid-Atlantic area. EPA pointed out that the 4,150 acre Gum Swamp Natural Area is located south of Stumpy Lake and that to the east is the 1,160 acre Upper West Neck Creek Natural Area, both of which contain stands of old growth cypress and tupelo and bottomland hardwood swamp which have been recognized as

significant natural areas by the Virginia Department of Conservation and Recreation (DCR). EPA also pointed out that the site is the headwaters of the North Landing River Wetland Ecosystem, located approximately one mile south of the site. EPA discussed historic wetland losses in the Virginia Tidewater area and discussed the importance of wetland functions and values. They discussed how developments to the north and west of the site and the resulting stormwater runoff have negatively impacted Stumpy Lake, Gum Swamp and the North Landing River. EPA discussed concerns with the stormwater management plan on site and its potential impacts on Stumpy Lake and Gum Swamp. EPA also indicated that under Section 402 of the Clean Water Act they do not allow surface waters to be used as treatment systems and that all stormwater management facilities must be located outside waters of the United States. EPA indicated a concern for indirect impacts to wetlands if the proposal is permitted. They are also concerned whether this proposal is part of a larger development and concerned that permitting this project would result in additional impacts in the area due to the fact that the applicant owns other parcels adjacent to this site. EPA recommended that an EIS be prepared to assess direct, indirect and cumulative impacts of the proposal keeping in mind future development in the area by the applicant or others. EPA is concerned about avoidance and minimization of wetland impacts and the proposed wetland mitigation and that the proposed wetland mitigation will not adequately mitigate old growth forested wetland impacts in a unique and ecologically valuable wetland system. EPA sent another letter dated 4/28/05 which reiterated many of the above points. In addition, EPA indicated that they reserve the option to elevate the Corps decision in accordance with Section 404(q) of the Clean Water Act and requested that the Corps provide EPA with the appropriate notice of its intent pursuant to Part IV of the 1992 Clean Water Act Section 404(q) Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army. EPA reiterated their concern that the project be reviewed in compliance with the CWA Section 404(b)(1) Guidelines.

The U.S. Fish and Wildlife Service (FWS) responded to the initial public notice via a letter dated 3/3/05. The FWS stated that the applicant's proposed impacts would exceed the acreage of impacts permitted in the City of Chesapeake from 1998-2002. FWS indicated that the amount of proposed impacts should dictate a stringent review of alternatives and indicated the issuance of a permit for this amount of impact would be precedent setting. FWS expressed concern that the impact acreage does not include Tulloch ditched wetland areas and that the Corps has not approved a wetland delineation for the property. FWS stated the Corps should include any impacts resulting from obtaining off site fill material for the proposed impacts as well as a Corps approved wetland delineation for any proposed borrow site. FWS requested that the applicant provide a map showing the geographic scope of the alternatives analysis and the criteria the applicant used to search for alternative sites. FWS indicated the applicant should not use things like return on investment, site size requirements and other criteria to limit available alternatives and suggested multiple sites could be utilized to serve the project

purpose. FWS recommended using Corps' Site Design Checklist and LID Calculations Worksheet to allow evaluation of the low impact development features in the proposed development. FWS opposed placing stormwater management facilities in wetlands. FWS pointed out that DCR has identified the eastern portion of this site within the North Landing River Macrosite and while the forested community on this site is not rare, it buffers the unique wetland resources downstream therefore requiring more scrutiny in the permit review process. FWS requested the applicant provide data on the effects of this project on migratory birds and integrating bird conservation principles by avoiding and minimizing impacts on migratory bird resources and restoration and enhancement of migratory bird habitat as practicable. FWS wanted the applicant to search for mitigation sites within the North Landing River watershed. FWS recommended that the Habitat Evaluation Procedure (HEP) be utilized too. FWS recommended the Corps prepare an EIS prior to making any permit decision and they recommended denial of the proposal. FWS indicated the proposal might result in substantial and unacceptable impacts to aquatic resources of national importance. Another letter dated 3/18/05 from FWS was received. This letter reiterated their belief that the proposal will have substantial and unacceptable impacts to aquatic resources of national importance.

The Corps issued a revised public notice dated 1/30/07 because of an increase in wetland impacts from 144.6 acres to 181.3 acres due to the Corps revising a previous DEQ approved wetland delineation resulting in an increase in the amount of wetlands on the site by 36.7 acres (and an increase in the proposed impacts by this same amount).

EPA responded to this public notice in a letter dated 2/13/07. The letter reiterated EPA's previous comments in letters dated 4/4/05 and 4/28/05 recommending denial or preparation of an EIS prior to making any decision on the proposal. They reiterated their responses were prepared consistent with the 404(q) memorandum. In addition, EPA reviewed information provided by the applicant and still feels the application is inconsistent with the 404(b)(1) Guidelines and recommended no permit be issued for the proposal. If an EIS is to be prepared, EPA recommended use of the HEP and consideration of the relationship between the wetlands on site and Stumpy Lake in that the proposal could exacerbate eutrophication problems currently occurring in Stumpy Lake.

A letter dated 2/12/07 from FWS was received. FWS reiterated that permitting this proposal would result in a significant degradation to waters of the U.S. The proposed impacts are significant due to the size of the proposed impact and the loss of these wetlands in perpetuity and they reiterated that the Norfolk District has never issued a permit for this amount of impact for a commercial/residential proposal before. They indicated that the applicant has not provided sufficient information to demonstrate the proposal complies with the 404(b)(1) Guidelines. FWS stated the applicant could construct components of the proposal on numerous

parcels, reduce the amount of development and indicated residential communities are not dependent on contiguous commercial developments. FWS reiterated their previous comments that the proposal will have a substantial and unacceptable impact on aquatic resources of national importance.

The National Marine Fisheries Service submitted comments indicating that the wetlands on site perform many valuable functions that protect downstream water quality and provide habitat for wildlife.

The Virginia Department of Conservation and Recreation (DCR) submitted comments on the project and stated the property is within the North Landing River-Gum Swamp conservation site. DCR also indicated that the Virginia least trillium, the canebrake rattlesnake and the Dismal Swamp southeastern shrew have been documented within the vicinity of the project site. Additionally, DCR indicated that the site may support habitat for the Eastern big-eared bat.

The Virginia Department of Game and Inland Fisheries submitted comments indicating the nearby presence of bald eagles, the canebrake rattlesnake and the Dismal Swamp southeastern shrew. They commented that the proposed preservation portion of the mitigation would provide an adequate buffer for the bald eagles and that the preservation and proposed mitigation sites would provide a net gain in habitat for the canebrake rattlesnake and Dismal Swamp southeastern shrew. They also indicate that per the DEQ permit, the site contractors will be trained regarding protection of these species and recommend that strict erosion and sedimentation controls be maintained for the proposed work.

The City of Virginia Beach commented on the proposal with concerns about cumulative impacts, their investment in the Stumpy Lake property which they purchased from the City of Norfolk for preservation/conservation, protection of Stumpy Lake as a supplemental water supply, mitigation outside the drainage area and wetland losses in the area, and they requested that an environmental impact statement (EIS) be prepared.

The City of Chesapeake submitted comments on the proposal and indicated that the proposed plan does not fully comply with the 1995 rezoning for the property due to proffers and locations of uses (types of development). The City indicated that they own a 20 acre park site (located in the 90 acre upland area) and commented that the applicant does not have an agreement to allow development in this park site as the site plans show. The City suggested that the applicant consider clustering the development on site to reduce impacts on the site as the property is within a conservation corridor on the City's Southern Watershed Conservation Plan. The City indicated that the clustering concept was developed to conserve areas containing unique and sensitive natural features, to provide design flexibility and efficiency in siting infrastructure (roads and utilities) and for conservation of areas to benefit the residents.

The Sierra Club submitted comments expressing concerns over flooding due to hurricanes from development of this site, concerns over bald eagles and recommended an EIS.

Wetlands Watch submitted comments expressing concerns regarding cumulative impacts, avoidance and minimization of wetland impacts, and the proposed wetland mitigation. They further stated that this permit should be denied and an EIS prepared.

The Chesapeake Bay Foundation (CBF) submitted comments recommending denial of the permit request based on a failure to avoid and minimize wetland impacts, failure to address the value of the wetlands to be impacted, and secondary impacts (cumulative impacts). They stated that if the permit is not denied an EIS must be completed. CBF also submitted supplementary information regarding property ownership, property costs, and alternative site plans that avoid and minimize wetland impacts.

Approximately 280 Chesapeake Bay Foundation website visitors responded to the second public notice via a generic email sent from their website which stated:

"I urge you to deny the federal wetland impact permit to Tri-City Properties, LLC, for the proposed development near Stumpy Lake in Chesapeake, Va.

If approved, this project would destroy 181 acres of nontidal wetlands, making it the third-largest permitted loss of wetlands in Virginia since the Clean Water Act. At a minimum, the U.S. Army Corps of Engineers should require a public hearing before making a permit decision. Additional opportunities for public participation in this process are warranted for this unnecessary destruction of Virginia's natural resources.

Thank you very much."

In addition to the comments discussed above, 49 other comments from the public were received in response to both public notices regarding this proposal. Only two persons commented in favor of the proposed development. One citizen favored the commercial and retail portions of the development while a church pastor welcomed the development as a way to boost church membership. However, the majority of the public comments were against issuance of a permit for this proposal. Many indicated issuing a permit for this impact amount would set a new precedent for future impacts, expressed concern for cumulative impacts in the area and a concern for downstream waters, Gum Swamp/North Landing River, and the adjacent City of Virginia Beach property purchased for preservation. In addition, some commented on the impact of this proposed development on flooding issues that exist in the area. The proposed mitigation site that is out of the Gum Swamp/North Landing River watershed was a concern to numerous individuals. Many requested a public hearing and requested that an Environmental Impact Statement be

prepared to fully consider the impacts from this proposal. A few commenters generated specific comments that are mentioned in applicable sections above.

e. A Discussion of Conformity With the Guidelines Published for the Discharge of Dredged or Fill Material in Waters of the United States (40 CFR, Part 230): The placement of fill material in the forested wetlands on the site is considered a discharge of fill into waters of the United States. Therefore, an evaluation of the chemical and biological effects of the proposed fill activity was conducted in accordance with the 404 (b) (1) guidelines formulated by the EPA and published in Volume 45, Number 249 of the Federal Register, dated 24 December 1980. The Section 404(b)(1) Guidelines state at 230.10(a)(3) "Where the activity associated with a discharge which is proposed for a special aquatic site does not require access or proximity to or siting within the special aquatic site in question to fulfill its basic project purpose (i.e. is not water dependent), practicable alternatives that do not involve special aquatic sites are presumed to be available, unless clearly demonstrated otherwise. In addition, where a discharge is proposed for a special aquatic site, all practicable alternatives to the proposed discharge which do not involve a discharge into a special aquatic site are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated otherwise." It is the responsibility of the applicant to rebut the presumptions that practicable alternatives exist and that such alternatives would have less adverse impact on the aquatic ecosystem. The applicant provided an analysis of offsite alternatives within a 30 square mile area concentrated around the Greenbrier area of the City of Chesapeake. They focused on sites that would allow for approximately 328 acres of development (same acreage proposed to be developed on the applicant's property). The applicant indicated that separating commercial and residential development on different sites would defeat their purpose of creating a master planned mixed-use community. The applicant indicated that increasing distance between these features would make pedestrian access more difficult and encourage the use of motor vehicles that leads to air pollution. We concur that the applicants search area for alternatives is adequate, but we do not concur that the applicant could not separate the commercial and residential portions of their development as it impacts their ability to attempt to avoid and minimize impacts to wetlands. The Greenbrier area is heavily developed already. The applicant's proposal does not correct already existing sprawl. Nearby commercial and residential development would still exist even if they separated the commercial and residential portions of the proposed development. In other words, the applicant's residential development could serve an existing commercial development area or vice versa.

The applicant identified 3 properties within the search area as potential offsite alternatives to the proposed development site. The first site consists of 236 acres of land and is owned by CBN/Regent University Complex and the applicant determined it to be infeasible as it is smaller than 328 acres and is unlikely to be sold by the owner as it is their last remaining developable land. The second alternative site examined, the Thrasher site, is located west of Centerville Turnpike (across the road from the proposed development site). This site is 447 acres in size

and there is an active landfill on the property. The applicant does not consider the site a suitable alternative because the site is not zoned for the type of development proposed and due to the presence of the landfill. The third site is 195.66 acres in size and the northern portion is zoned for Office, Research and Commerce while the southern portion is within a conservation district. The size of the property and the fact that it would have to be rezoned were determined by the applicant to be limiting factors, making this property unsuitable. We asked the applicant to consider the Lakewood Property which is located southeast of the proposed site, is owned by the applicant and is much larger than 328 acres. A previous wetland delineation on the property found large areas of contiguous uplands leading us to believe it might be a suitable alternative. The wetland delineation on the property had expired and the applicant had since logged the site. The site was reexamined in February 2007 and found to contain substantially more wetlands than shown on the previous wetland delineation thus making this site an unsuitable offsite alternative. All other properties owned by the applicant in the vicinity of the proposed development site are predominantly wetlands and therefore not suitable alternative sites as wetland impacts would likely be equal to or greater than the impacts proposed on this site.

Our June 7, 2005 additional information request and the applicant's September 18, 2006 response:

On June 7, 2005 we sent the applicant an initial request for additional information upon reviewing their permit application. Among things requested were economic data for on site alternatives that avoid and minimize impacts to wetlands on the proposed development site. In order to evaluate whether particular alternatives were practicable, cost was one factor considered. Our permit decision does not have to guarantee the applicant a profit, however, cost and/or economic viability of a project is a consideration both in the public interest review analysis and the consideration of practicable alternatives to the proposal. The information initially provided by the applicant indicated that the applicant has approximately \$24 million invested in the property (land costs and carrying costs). City records show that the applicant, Tri-City Properties, LLC, purchased the 428-acre parcel proposed for development from TransAmerica Services for \$250,000.00. Our basis for the \$250,000.00 purchase price was determined by examining taxes paid for this property transaction (no grantors tax was paid and there was no increase in taxes for recording fees). This figure includes all purchase costs and carrying costs of the land back to the mid 1980's prior to Tri-City Properties purchase of the land.

In response to our letter, the applicant submitted the following three alternatives, one proposing development of the entire site which would impact more wetlands than their proposed development, their proposed development plan and a plan with no wetland impacts (sale of the property). They did not provide any plans showing minimization of wetland impacts as we had asked.

Alternative 1 (best case, Exhibit F): this alternative would impact 253 acres of wetlands by developing all 428 acres of the Centerville Property. The impacts to wetlands from this alternative exceed the wetland impacts which the applicant has applied for (144.6 acre impact amount prior to delineation modification) and is not a viable alternative as the applicant's request for less impacts shows this proposed impact can be minimized. This alternative represents the applicant's greatest financial gain.

Alternative 2 (proposed development plan, Exhibit B): this alternative involves impacts to 144.6 acres of wetlands (impact amount prior to delineation modification). The applicant feels the data provided for this alternative proves that no practicable alternatives exist. The data provided did not show that this alternative is the least environmentally damaging practicable alternative per the Section 404(b)(1) Guidelines. The least environmentally damaging practicable alternative appears to be development of the 90 acres of uplands with a mixed-use development consisting of commercial and residential development unless the applicant can rebut this presumption. The applicant would require rezoning for development of this portion of the property, but any development proposal for the entire parcel would similarly require rezoning (per numerous discussions with the City of Chesapeake).

Alternative 3 (worst case, Exhibit G): this plan involves the 90 acres of contiguous uplands but rather than showing a development plan and economic data of only the 90 acres of upland to determine its practicability for development as requested, the applicant has merely shown data for the sale of the property. The 90 acres could be developed but would require rezoning and renegotiation of proffers with the City of Chesapeake. Therefore the analysis submitted in the September 18, 2006 package did not rebut the presumption that practicable alternatives with fewer impacts to the aquatic ecosystem exist.

Applicant's January 11, 2007 submittal:

The applicant submitted information on January 11, 2007 one day prior to a meeting to discuss the proposal. These data included a list of participants who would attend the meeting on behalf of the applicant and a summary of information related to their permit request. The applicant summarized that their expert found no suitable offsite alternatives. We concur with the search area, concur that alternatives examined were not practicable (mainly due to unavailability to purchase the properties) but do not agree that commercial and residential development could not be separated. The applicant summarized their submission of economic data and stated that even using the lower property costs as we requested shows the proposed impacts to 181.3 acres of wetlands will result in a 5.7% profit as compared to the full build out proposal (developing all 428 acres) which would result in a 25% profit. The applicant stated that if we do not issue a

permit they would incur a multi-million dollar loss and concluded their proposal is the least damaging practicable alternative that meets the project purpose.

The applicant addressed avoidance of wetland impacts saying originally they planned to develop the entire property and impact 253.5 acres of wetlands but reduced wetland impacts to 109.6 acres by moving the proffered school site to an offsite location to free up 20 acres in the 90 acres of upland for development, moving the proffered park site to the north of Plantation Woods Parkway to free up another 20 acres, and preserving 100.6 acres of the property. The applicant stated that they cannot separate the commercial and residential portions of the development as that would negatively affect the economic viability of the proposed mixed use development, lead to increased air pollution (walking to nearby retail versus driving) and degrade the benefits of the proposed mixed use development. The applicant stated that they minimized impacts by the use of low impact development for stormwater, reduced road widths for less impervious surfaces and stormwater ponds with wetland benches to filter stormwater. Finally, the applicant stated that they proposed to preserve 100.6 acres of wetlands on site, preserve 145 acres of forested wetlands on an adjacent site and to restore 290 acres of cropland to forested wetlands near Route 17 and Ballahack Road within the City of Chesapeake. The applicant's data does not rebut the presumption that a less damaging practicable alternative exists.

Our March 8, 2007 request for additional information and the applicant's April 26, 2007 response:

The applicant provided 3 alternatives in their September 18, 2006 reply consisting of development of the entire site, their proposed alternative and an alternative to sell the property instead of addressing a no wetland impact alternative as requested. The applicant also failed to provide a variety of alternatives with impacts between the preferred alternative and the no impact alternative. For this reason, we sent the applicant a letter dated March 8, 2007 and requested additional information on other alternative development scenarios that would reduce impacts to wetlands on the site. We asked that they submit a reasonable economic analysis reflecting the type(s) of development that maximizes the profit potential of various onsite alternatives while also minimizing wetland impacts for proposals that would impact 75% of the 181.3 acres of proposed impacts (137.1 acres of wetland impacts), 50% of the 181.3 acres of proposed impacts (91.10 acres of wetland impacts), 25% of the proposed 181.3 acres of impacts (47.35 acres of wetland impacts) and 10% of the proposed 181.3 acres of impacts (18.25 acres of wetland impacts). We also asked the applicant to reevaluate the previously submitted alternatives, including the 90 acre no impact alternative.

In addition, we indicated that we would consider their purchase price for the property to be \$250,000 and asked for a break down of expenditure costs totaling \$4,562,084 for the property. The applicant responded that they still believe their

investment in the property is \$24 million but used \$4.5 million in their calculations as we requested. The data showed that approximately \$1,672,917.00 of the expenditure costs were associated with ditch excavation in wetlands in the year 2000. This activity is the subject of an Environmental Protection Agency investigation that has not been resolved, for this reason we will not consider those expenditure costs in the applicant's costs for the land. Including costs such as property, taxes and interest we calculated the costs to the applicant for the property to be \$2,889,168.00 (\$4,562,085.00 of costs taken from Wetland Permit Application for the Centerville Property, Economic Analysis, Revised April 26, 2007 submitted by the applicant minus \$1,672,917.00 in ditching costs). We asked the applicant to use \$250,000 as the property acquisition cost which they did, and that the \$1.6 million in ditching costs be excluded, but the applicant disagreed with our exclusion request and included the costs of ditching the site. The costs for the ditch work remain in the cost data they submitted. We will not consider these costs in our review of their data.

The applicant stated in their response that the proposed development on 328 acres of land will result in a modest 5.7% return and the applicant concluded that their proposal is the only practicable alternative. The following expresses the Corps' analysis of each alternative submitted in the April 26, 2007 response:

Alternative A: this alternative would impact 253 acres of wetlands and would involve developing all 428 acres of the Centerville Property. This alternative exceeds wetland impacts that the applicant has applied for (181.3 acres of wetland impacts on 286 acres of the property) and is not the least damaging practicable alternative as the current proposal shows that these wetland impacts can be minimized. This alternative represents the applicant's greatest financial gain.

Alternative B: this alternative is the same proposal subject to this permit review. The applicant stated this alternative meets their project purpose and need as it is profitable and the applicant stated this option is the least environmentally damaging practicable alternative. This alternative has not been shown by the information provided by the applicant to be the least environmentally damaging practicable alternative per the Section 404(b) (1) Guidelines. The applicant has not shown that impacts on site have been avoided or minimized to the maximum extent possible. For example, no development layout was provided for full development of the contiguous 90 acres of uplands north of Elbow Road. The proposed development plans public noticed on 2/1/05 and 1/20/07 both show this 90 acre portion of the property as single family lots while this site plan shows a 20 acre park site within this 90 acre area and shows the majority of this 90 acres zoned B-1 with some R-15S lots on the eastern and northern portion of the 90 acres, but no development layout is shown in most of this area. The least environmentally damaging practicable alternative appears to be the development of only the 90 acres of uplands with a mixed-use development consisting of some degree of commercial and residential development. The applicant would require rezoning

for development of this portion of the property, but any development on the site even the original proposal, would require City rezoning (per numerous discussions with the City of Chesapeake). The applicant would need to complete a rezoning request to clearly determine how much development could occur in this 90 acre area. Without analysis of development of the 90 acre parcel, the applicant has not rebutted the presumption that a less environmentally damaging practicable alternative to the proposed 181.3 acres of impacts exists.

Alternative C: this alternative would impact 137.10 acres of wetlands. This alternative has not been shown by the information provided by the applicant to be the least environmentally damaging practicable alternative as it appears impacts to wetlands on the site could be minimized for the same reasons as stated in Alternative B. No development layout was provided for full development of the contiguous 90 acres of uplands north of Elbow Road for this alternative. The proposed development plans public noticed on 2/1/05 and 1/20/07 both show this 90 acre portion of the property as single family lots while this site plan shows a 20 acre park site within this 90 acre area and shows the majority of this 90 acres zoned B-1 with some R-15S lots on the eastern and northern portion of the 90 acres, but no development layout is shown in most of this area. As explained above, the applicant has not rebutted the presumption that the alternative of developing the 90 acres of upland is the least environmentally damaging practicable alternative per the Section 404(b)(1) Guidelines.

Alternative D: this alternative would impact 91.10 acres of wetlands. No development layout was provided for full development of the contiguous 90 acres of uplands north of Elbow Road for this alternative. The proposed development plans public noticed on 2/1/05 and 1/20/07 both show this 90 acre portion of the property as single family lots while this site plan shows a 20 acre park site within this 90 acre area and shows the majority of this 90 acres zoned B-1 with some R-15S lots on the eastern and northern portion of the 90 acres, but no development layout is shown in most of this area. As explained above, the applicant has not rebutted the presumption that the alternative of developing the 90 acres of upland is the least environmentally damaging practicable alternative per the Section 404(b)(1) Guidelines.

Alternative E: this alternative would impact 47.35 acres of wetlands. No development layout was provided for full development of the contiguous 90 acres of uplands north of Elbow Road for this alternative. The proposed development plans public noticed on 2/1/05 and 1/20/07 both show this 90 acre portion of the property as single family lots while this site plan shows a 20 acre park site within this 90 acre area and shows the majority of this 90 acres zoned B-1 with some R-15S lots on the eastern and northern portion of the 90 acres, but no development layout is shown in most of this area. The applicant has not rebutted the presumption that the alternative of developing the 90 acres of upland is the least

environmentally damaging practicable alternative per the Section 404(b)(1) Guidelines.

Alternative F: this alternative would impact 18.25 acres of wetlands. No development layout was provided for full development of the contiguous 90 acres of uplands north of Elbow Road for this alternative. The proposed development plans public noticed on 2/1/05 and 1/20/07 both show this 90 acre portion of the property as single family lots while this site plan shows a 20 acre park site within this 90 acre area and shows the majority of this 90 acres zoned B-1 with some R-15S lots on the eastern and northern portion of the 90 acres, but no development layout is shown in most of this area. The applicant has not rebutted the presumption that this alternative is the least environmentally damaging practicable alternative per the Section 404(b)(1) Guidelines.

Alternative G: this alternative involves the 90 acres of contiguous uplands located north of Elbow Road; the applicant has termed this the no build alternative. The applicant, who was asked in letters dated June 7, 2005 and March 8, 2007 (and later on September 5, 2007) to develop a plan maximizing the use of the 90 acres of upland, failed to provide a plan as requested. Instead, the applicant only showed economic data for the sale of the property and determined this would be an economic loss and therefore not a valid alternative. The applicant also stated that the "no build" (sale) alternative does not meet their project purpose. The applicant's project purpose is the development of a master planned mixed-use community to support the rapidly expanding commerce and employment center around the I-64 interchange at Greenbrier. The overall project purpose is to provide residential housing and commercial development within the Greenbrier area of Chesapeake.

The 90 acres are zoned for mixed use and include 38 acres of B1 zoning (to be used for business/office park) and R-15 single family residential along the eastern edge, the northern portion and the southwest portion of the 90 acres. The applicant showed a proffered park site and school site in this 90-acre upland area on various development scenarios for this property. The applicant will be required to obtain rezoning for any development on this property per the City of Chesapeake. He could therefore renegotiate the proffers (potentially reducing the size of the park, less development may not require a school site, etc.) that would affect the amount of developable upland (removal of park area and school site results in more developable uplands) and increase the profitability of developing the 90 acres. As the applicant has not rebutted the presumption that maximum utilization of the 90 acres of upland is the least environmentally damaging practicable alternative, we cannot permit the proposed 181.3 acres of wetland impacts.

Our September 5, 2007 request for additional information and the applicant's October 31, 2007 response:

The applicant's April 26, 2007 response included the development alternatives that we requested and economic data associated with those alternatives. We noted discrepancies amongst the economic data between the various alternatives and had other issues with their submittal (detailed below). In addition, the applicant again failed to provide a site plan and economic data for the no wetland impact alternative. We sent the applicant a letter dated September 5, 2007 seeking additional clarification of the information provided on April 26, 2007 and stated the proposed 181.3 acres of wetland impacts did not appear to represent the least environmentally damaging practicable alternative for developing this parcel. Furthermore, the data provided did not rebut the presumption that a less environmentally damaging practicable alternative existed; i.e., the development of the 90 acres of upland.

In our letter we indicated an alternative with no impacts to wetlands, development of the 90 acres of contiguous uplands in a manner that maximizes its development and profit generating potential, was not included in their response. In its October 31, 2007 response the applicant stated that Exhibit G in the April 26, 2007 submittal and Alternative 3 in the September 18, 2006 submittal (both showing the sale of the land) is the no impact alternative. They further stated that they are not required to propose and rebut alternatives that do not meet the project purpose stated in the application. They also stated that if they could have developed the 90 acres of upland a manner that was economically and logistically feasible they would have. The proposed sale of the property did not address our request for a development plan in the 90-acre area and no economic data for developing the 90 acres were submitted so we cannot conclude that it is not a practicable alternative. The overall project purpose is to provide residential and commercial development within the Greenbrier area of Chesapeake and the applicant has not shown that developing the 90 acres would not meet that purpose.

In all communications we asked the applicant to redesign the development to maximize the development potential of each alternative. However, in the April 26, 2007 submittal the applicant provided no conceptual redesigns but merely showed the same site plans for each alternative but with portions removed according to the aforementioned percentages. In doing so, however, the applicant removed higher revenue development units rather than removing lower revenue units. In its October 31, 2007 response the applicant stated that zoning and Elbow Road's inability to handle additional traffic were factors limiting redesign of the proposal. But the applicant has to apply to rezone any alternative including their preferred alternative and will have to renegotiate proffers with the City at the same time. In doing so they can determine how much development potential exists for the 90 acre upland area. In addition, the City of Chesapeake stated that some development could occur on the 90 acres which would trigger only minor improvements to Elbow Road. The City stated that such improvements could be done within the existing right of way.

We also expressed concerns with the 10-year construction timeline and revenue generation of various alternatives, including Exhibit F in the April 26, 2007 submittal (proposal to impact 18.1 acres of wetlands). The construction schedule was not shortened or rearranged to maximize revenue and reduce costs (for example when commercial

development scheduled to be constructed in year 3 was eliminated, the office park construction was not moved from year 6 to 3). The applicant stated the construction schedule and resulting revenue could not be modified because under the current rezoning, roadwork and utilities must be constructed from west to east across the development and this controls the construction timeline. While development from west to east may be a requirement of current zoning, the applicant's proposal does not comply with current zoning and development of the parcel under any scenario submitted would require rezoning/renegotiation with the City. Therefore, the construction timeline can be readjusted resulting in additional revenue.

We questioned the low price per acre for the proposed sale of the land that the applicant supplied for Exhibit G in the April 26, 2007 submittal. The applicant proposed the sale of the 428 acres of property in lieu of information relating to an alternative showing development of the 90 acres of contiguous uplands. Specifically, 318 acres of the 428-acre parcel are valued at only \$500 per acre while Exhibit 4 of the same submittal shows the value of 145 acres to be preserved on an adjoining site for mitigation being valued at \$2,856 per acre. Documentation provided by Tri-City Properties to DEQ states that the adjacent 351.8-acre parcel comprised of "mostly wetlands" was purchased for approximately \$1,000,000 or approximately \$2,849 per acre. The applicant stated that the land costs used are based on a 2006 appraisal and reflect current property values. We feel the property costs are low but regardless we requested a development plan maximizing development of the 90 acres and not the proposed sale of the property.

Further, the applicant has incorrectly included higher mitigation costs in their calculation of costs associated with each proposal in Exhibit 4. Typically 2:1 mitigation for unavoidable wetland impacts is required. However, they proposed preservation of wetlands on the site and on an adjacent site in addition to the typical 2:1 requirements. The applicant indicated the mitigation costs above the 2:1 requirement need to be considered because they are required per conditions of their Virginia Water Protection Permit and it is a cost that will have to be incurred to develop the site. We disagree with the applicant on this issue. The current 401 Water Quality Certificate is for 144.6 acres of wetlands. If a Corps permit was issued for the 181.3 acre impact proposal, DEQ may have to issue a revised water quality certification for the additional impact acreage. Mitigation requirements could be renegotiated at that time.

Exhibit 1 of the April 26, 2007 submittal included a note at the bottom of the "investment in land" page that suggested the interest burden listed comes not only from loans on the subject property but also from other costs and properties. Only actual interest paid that is attributable to this property may be included in the costs. Similarly, if taxes were deducted from income on tax returns, the costs may not be included here. We also indicated that costs associated with site drainage and ditching should not be included in the costs. In their October 31, 2007 submittal the applicant stated that they lowered their costs to address our concern on the interest burden. However, the applicant stated that inclusion of ditching costs should be allowed as they were necessary costs to prepare the land for development and further stated the work was done legally. We disagree that the ditching

costs should be included as the ditching is the subject of an enforcement action by the Environmental Protection Agency.

Revenue for each unit type, aside from the R-15 units, appear to be virtually unchanged since similar documentation was provided to DEQ in 2003. The applicant stated the unit costs are from a current market study by Prudential Decker Realty. They further indicated that commercial real estate has more than doubled since 2003 while single family lots initially increased but had decreased in 2007 while the other unit types varied somewhat but are basically the same price at this time. The applicant had Prudential Decker Realty reverify the unit prices. The applicant also stated that recent unit values of multi-family and townhome units have increased due to a shortage of affordable housing.

We questioned the high construction costs for storm water facilities on the property that are roughly half the onsite construction costs. The applicant responded that their onsite construction costs for storm water work are high due to significant labor, specialization, and technology required for incorporating low impact development into the development plan. The applicant's data showed construction costs of \$9.00 per cubic yard for excavation of storm water ponds on the site. Typical costs for excavation and use of spoil on site are \$5.00 to \$10.00 per cubic yard for this type of work and the applicant's cost estimate is on the higher side. We are not requiring the use of low impact development methods of storm water treatment; the applicant is voluntarily doing this at a higher construction cost. The applicant then cites these increased costs as justification for additional development and wetland impacts in order to recoup funds for this method of storm water treatment. Less expensive storm water treatment scenarios (such as BMP's without wetland benches) are available and the use of these would reduce the amount of development, and subsequently higher wetland impacts, that the applicant says is necessary to recoup the construction costs.

A new 30-acre and an 80-acre wetland impact alternative were also presented in the applicant's October 31, 2007 response. The applicant stated that the 80-acre wetland impact alternative is a "compromise" to the 181.3 acres of impacts. The 80-acre alternative, which still does not show any development in the 90 acres of upland, would result in a 1% return on investment whereas the 30-acre alternative would result in a financial loss. Under the 80-acre alternative, the applicant proposed wetland mitigation on the 90 acres of upland. However, mitigation sequencing requires that wetland impacts be avoided, then minimized, and then mitigated. Therefore, suggesting that upland areas be used for mitigation rather than development is contrary to regulation. Further, if the applicant would "compromise" to an 80 acre wetland impact that shows that the proposed 181.3 acre wetland impact could be substantially reduced.

The applicant indicated the no wetland impact alternative (proposed sale of the 428 acre parcel instead of development of the 90 acres of contiguous uplands), is infeasible and further stated that development of this 90 acre area would actually result in a \$13 million loss due to improvements the City would require to Elbow Road and installation of a water line. The City of Chesapeake stated at a meeting on January 31, 2008, that the applicant

would have to submit a plan for their review before they can determine what improvements will be required for development of the 90 acres of upland so the applicant cannot conclude that this portion of the property is not developable nor determine the potential costs of upgrading Elbow Road. Below is additional information on alternatives presented in this response:

Preferred plan: this alternative represents the currently proposed development plan that would impact 181.3 acres of wetlands. Per the applicant, this alternative meets their project purpose and need and it is profitable. This alternative has not been shown by the information provided by the applicant to be the least environmentally damaging practicable alternative per the Section 404(b)(1) Guidelines. No development layout or economic data has ever been provided for only development of the contiguous 90 acres of uplands, the no impact alternative, north of Elbow Road despite numerous requests. The least environmentally damaging practicable alternative appears to be some degree of development of only the 90 acres of uplands with a mixed-use development consisting of commercial and residential development. The applicant would require rezoning for development of this portion of the property, but any development on the site including the current proposal would require City approval (per numerous discussions with the City of Chesapeake). As the applicant would need to complete a rezoning request through the City of Chesapeake to clearly determine how much development could occur in this upland area, at this point the applicant has not rebutted the presumption that a less environmentally damaging practicable alternative to the proposed 181.3 acres of wetland impacts exists.

Alternative A: this alternative would impact 30 acres of wetlands. This site plan shows approximately 124 single-family lots, a 20-acre park site and a 17-acre school site in the 90 acres of uplands. On the site plans associated with the two proposals that we issued a public notice, this 90-acre area was also shown to consist of single-family lots. The 30 acres of wetland impacts resulting from this alternative are associated with commercial and residential development in the north/northwest portion of the site near Centerville Turnpike. However, the applicant has not rebutted the presumption that the alternative of developing the 90 acres of upland is the least environmentally damaging practicable alternative per the Section 404(b)(1) Guidelines.

Alternative B: this proposal would impact 80 acres of wetlands in the north/northwestern portion of the site near Centerville Turnpike. The applicant stated this alternative would provide a 1% return on their investment. The 90 acres of uplands is proposed for use as mitigation: 80 acres of wetland restoration, with a 20-acre park site in the uplands. However, the upland area is approximately 90 acres in size and could not accommodate the 100 acres the applicant requires for the 20-acre park and the wetland restoration. We cannot permit the use of 90 acres of uplands for predominantly wetland mitigation and allow 80 acres of wetland impacts without the applicant justifying this use of the uplands. Mitigation

sequencing requires that wetland impacts be avoided, then minimized, and then mitigated. Therefore, suggesting that 80 acres of upland area be used for 80 acres of wetland mitigation rather than development is contrary to regulation. The applicant stated that the City would require improvements to Elbow Road from the Virginia Beach border to Centerville Turnpike at a cost of \$10.6 million and this makes the development of the 90-acre upland area is infeasible. In discussions with the City of Chesapeake, this information is not entirely correct as they would likely require improvements to Elbow Road but the extent of improvements would be based on the density of development proposed. The submission of an alternative impacting 80 acres that the applicant stated provides them with a profitable project proves that the 181.3 acres of wetland impacts can be minimized substantially.

Applicant's December 11, 2007 submittal:

On December 11, 2007 the applicant submitted additional information related to their October 31, 2007 submittal. Specifically, they had revised economic data for Alternative A, the 30 acre wetland impact alternative, showing recalculated economic data in which they substituted the revenues and decreased on site development costs for the office park per the zoning on that portion of the 90 acres. Based on these data, they again concluded that this alternative will result in a loss of \$13,499,283. The applicant indicated that loss does not include costs for proffers required for the proposed development. The applicant stated they would be required to widen a portion of Elbow Road to 4 lanes due to the traffic generated by the commercial development. Nothing to support the assertion that additional lanes would be required by the City was provided. The documentation also included economic data substituting the construction of Plantation Woods Parkway across the site to eliminate the need for Elbow Road improvements for this same alternative, and the applicant again concluded this would result in a financial loss. The applicant again stated they feel their preferred site plan for 181.3 acres of wetland impacts has avoided and minimized wetland impacts, fully mitigates the impacts and is the least environmentally damaging practicable alternative (as is Alternative B the 80 acre wetland impact alternative they proposed). Again, since the degree of development on the 90 acres is uncertain and required proffers unclear, these data do not rebut the presumption that development of only the 90 acres of uplands is the least environmentally damaging practicable alternative.

For each alternative, other than the proposed 181.3 acres of wetland impacts submitted with all responses and the 80-acre impact alternative, the applicant concludes the return on their investment makes the other alternatives infeasible. Economic data submitted by the applicant was examined and numerous inconsistencies with these data amongst the alternatives were found. The applicant's data for these two profitable alternatives does not rebut the presumption that a less damaging practicable alternative exists.

In addition, the applicant used the originally proposed 328 acre development plan for all onsite alternatives rather than conceptually redesigning the development plan and modifying the construction schedule to maximize the return on each alternative. By redesigning specifically for each alternative, in particular the alternatives with less impacts and the no wetland impact alternative, the applicant would have been able to design the proposal to make the most profitable use of buildable space for each alternative and would have more accurately been able to determine the road layouts and costs, stormwater requirements and utility work required for each alternative. Within the 90 acres of contiguous uplands the applicant has 38 acres zoned B1 and the applicant indicates this would allow for the construction of a campus style office park. In addition, the applicant has uplands zoned R-15 along the eastern edge of this upland area, in the southwest corner of the upland area and along the northern portion of the upland area. Approximately 50+ lots could be developed in this area.

The City of Chesapeake has indicated that under the current zoning the applicant would be required to construct Plantation Woods Parkway concurrently as development proceeds eastward across the property from Centerville Turnpike. They also indicated the applicant is not required to construct Plantation Woods Parkway all the way to Elbow Road but that there is a general requirement for two access points to a development for public safety reasons. Elimination of Plantation Woods Parkway would eliminate up to 12.5 acres of wetland impacts and reduce construction costs by approximately \$5.5 to \$6 million and eliminate segmentation of a large contiguous wetland area. Less development would also reduce the amount of stormwater ponds required to meet standards and that would also reduce construction costs. Elimination or reduction of wetland impacts would eliminate or reduce wetland mitigation costs too. The applicant proffered 20 acres of the 90 acres of upland area to the City of Chesapeake for a park, a development plan with less residential units would also likely reduce the amount of park land required and give the applicant more developable upland area. The City of Chesapeake Department of Planning stated changes in zoning and proffers could be negotiated with the applicant based on a reduced development proposal. The City passed a revised residential cluster development ordinance to aid in the conservation of open land, including areas containing unique and sensitive natural features such as woodlands, streams, floodplains and wetlands by setting them aside from development. This also allows greater design flexibility and efficiency in the siting of services and infrastructure, including the opportunity to reduce the length of roads, utility lines and the amount of paving required for residential development. In its response to the public notice dated 1/20/07, the City stated "Consideration should be given to clustering techniques to help maximize the preservation of environmentally sensitive areas on the project site." The applicant stated in their submittal dated April 26, 2007 that clustering is not feasible as the lot sizes would be too small for homes with swimming pools, the concept would impact curb appeal, too many lots would have to border open space and the projected decrease in lot prices would make the concept financially infeasible. In a submission dated October 31, 2007 the applicant stated "the demand for single-family lots is on a rapid decline and the need for multi-family units and affordable housing is on the rise." This suggests that clustering, which would reduce impacts to wetlands, is a viable alternative.

The applicant examined a number of alternatives with varying impacts to wetlands. The applicant, however, failed to ever propose a development plan for only the 90 acres of uplands and provide corresponding economic data for us to determine if the no wetland impact alternative would be practicable. The applicant has not shown that development of only the 90 acres is the least environmentally damaging practicable alternative. They only proposed the sale of the property when asked repeatedly to evaluate development of these uplands. The applicant failed to show that the 181.3-acre wetland impact alternative is the least environmentally damaging practicable alternative that avoids and minimizes wetland impacts to the maximum extent practicable. The applicant has failed to rebut the presumption of the 404(b)(1) guidelines that a less environmentally damaging practicable alternative exists for the proposed development. An alternative that maximizes the use of the 90 acres of contiguous uplands and impacts some wetlands may be permissible, provided the applicant demonstrates it is the least environmentally damaging practicable alternative. However, the applicant needs to reapply to the City of Chesapeake for rezoning and renegotiate proffers to determine the extent of development that is feasible in the 90 acre upland area before considering impacting any wetlands.

Per our regulations at 33 CFR 325, Appendix B, paragraph 7 “The decision option to deny the permit results in the no action alternative (i.e. no activity requiring a Corps permit)”.

Subpart C - Potential Impacts on Physical and Chemical Characteristics of the Aquatic Ecosystem: The proposed fill would impact 181.3 acres of forested wetlands, which serve to maintain water quality by retaining sediments, pollutants and excess nutrients from upland runoff and retention of water. The fill will effectively convert the wetland substrate to upland and eliminate the water quality functions of those wetlands on this property. While mitigation is proposed for these impacts, the proposed wetland mitigation would be in the Northwest River watershed rather than the Gum Swamp/North Landing River watershed. Rare and unique wetlands are present downstream of this site in the Gum Swamp/North Landing River watershed (numerous parcels have been purchased by the Department of Conservation and Recreation (DCR) and TNC for preservation due to their unique ecological values and to create a corridor for wildlife) and this site serves as a buffer to these downstream areas. Elimination of the functions of these wetlands would increase sediments and nutrients in downstream waters, increase the eutrophication problem in Stumpy Lake and remove a source of organic material to downstream waters negatively impacting the base of the food chain. More information on these issues can be found in the conservation, wetlands, water quality and fish and wildlife sections above.

Subpart D - Potential Impacts on Biological Characteristics of the Aquatic Ecosystem: Adverse impacts to wildlife habitat will result from the loss of approximately 181.3 acres of forested wetlands. These wetlands provide food and shelter for birds and other wildlife as well as breeding and nesting sites and protective cover from predators. The DCR submitted comments to our public notice dated 2/13/07 indicating the property is within the North Landing River-Gum Swamp Conservation Site. Conservation Sites are tools that

represent key areas of the landscape that warrant review for possible conservation action due to natural heritage resources and the habitat they support. Resources of concern in the vicinity of the proposed site include: the bald eagle, the Canebrake rattlesnake, the Dismal Swamp Southeastern Shrew, the Eastern big-eared bat and the Virginia least trillium. In addition, the wetlands on this site buffer downstream wetland areas associated with Gum Swamp/North Landing River which contains unique ecological resources (TNC and DCR have purchased many parcels in this watershed for preservation). The wetlands on the site provide a source of decomposed organic matter that is released to downstream waters. This organic material provides food for microorganisms which serve as the base for the food chain. Additional information on biological functions of the wetlands on the site can be found in the wetland and fish and wildlife sections above.

Subpart E - Potential Impacts on Special Aquatic Sites: The proposed work would result in the loss of approximately 181.3 acres of forested wetland, which are considered a special aquatic site pursuant to 33 CFR 230.41. These wetlands serve to filter pollutants and sediments from upland runoff prior to the entry of said runoff into tributaries to Stumpy Lake and Gum Swamp/North Landing River. These wetlands also provide wildlife habitat. The proposed mitigation, while in the same HUC, would not be in the Gum Swamp/North Landing River watershed but in the Northwest River watershed. The wetlands on site act as a buffer to the unique ecological resources located downstream and are within an area designated by the State as "the highest priority for protection/conservation". The proposed impacts to this special aquatic site have been found contrary to the public interest.

Subpart F - Potential Effects on Human Use Characteristics: Stumpy Lake is a back up public water supply reservoir (for citizens of Norfolk and Virginia Beach) for drought conditions and to supplement water from Lake Gaston. Stumpy Lake, due to its shallow water depths and high levels of nutrients and turbidity, currently has poor water quality. Removal of the wetland functions on this site, which serve as the headwaters of Stumpy Lake, could further impair the water quality of Stumpy Lake (note that not all of the wetlands proposed to be impacted drain to Stumpy Lake).

Subpart G - Evaluation and Testing: The source of fill proposed to be placed in the wetlands will be from onsite spoil from excavation of stormwater ponds. This material is not likely to be a carrier of contaminants; therefore, no further testing would be required.

Subpart H - Actions to Minimize Adverse Effects: While the applicant presented an alternative impacting 80 acres of wetlands to avoid and minimize wetland impacts, they failed to provide a proposed development plan or financial data for the no wetland impact alternative that would provide 90 acres of contiguous upland development. Within this 90 acres the applicant has 38 acres of upland zoned B1 and the applicant concludes this would allow for the construction of a campus style office park. The degree of development on the 90 acres may vary depending on rezoning. In considering this option, the City of Chesapeake would renegotiate some of the proffers the applicant agreed to in order to obtain rezoning of the property in 1995 for the proposed development. The applicant has not rebutted the presumption that a less environmentally damaging practicable alternative exists for the development per the Section 404(b)(1) Guidelines.

Subpart B - Compliance With the Guidelines: The 404 (b)(1) Guidelines clearly indicate that no discharge of dredged and/or fill material shall be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic environment. Further, when discharges are proposed in special aquatic sites such as wetlands, less damaging practicable alternatives are presumed available. The applicant did not rebut the presumption that developing the 90 acres of contiguous uplands (containing 38 acres of land zoned B1 and suitable for an office/business park and areas zoned R15, residential single family consisting of lots 15,000 square feet) is the least damaging practicable alternative to the proposed development. Until the presumption is rebutted, the applicant's proposal fails to comply with the Section 404(b)(1) Guidelines.

Further, the guidelines indicate that no discharge of dredged or fill material shall be permitted which will cause or contribute to significant degradation of the waters of the United States. The proposed discharge would result in substantial adverse effects on special aquatic sites, conservation, wildlife and water quality.

f. Conclusion: I have evaluated, in light of the total public interest, all available information pertaining to the subject application. This information constitutes my Final Environmental Assessment and addresses comments received from Federal, State and local agencies and the general public.

In this evaluation, I have found that the proposed project does not comply with the Environmental Protection Agency's 404 (b)(1) guidelines and that the issuance of a permit would be contrary to the public interest because of the unnecessary loss of wetlands and the potential for cumulative environmental degradation (33 CFR 320.4 (a)). I have determined that the project would have a substantial, adverse, and avoidable effect on conservation, wetlands, general environmental concerns, flood hazards, water quality, and fish and wildlife values.

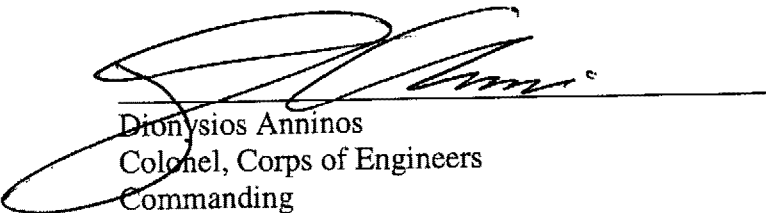
Based on all of the above, my decision is to deny Tri-City Properties, LLC permit application.

FONSI

(Finding of No Significant Impact)

I have determined that the decision on the project is not a major Federal action significantly affecting the quality of the human environment. Therefore, no Environmental Impact Statement will be prepared. This finding is based on information contained in my Final Environmental Assessment of the project and comments received from Federal, State and local agencies and the general public.

3 March 08
Date


Dionysios Anninos
Colonel, Corps of Engineers
Commanding